

## Care and Treatment Plan: Dental Abscess – Adult

### Definition

An infectious pustulent abscess of the mouth, formed in the gums, between the gums and the tooth, or at the root of a tooth.<sup>1</sup>

Registered Nurses with **Remote Nursing** and **RN First Call** Certified Practice designation (RN(C)) are authorized to manage, diagnose, and treat adults with dental abscess.

**Note:** A *consultation* refers to the RN(C) collaborating with members of the care team, such as a physician, nurse practitioner, or pharmacist, to support decision-making processes related to the diagnosis, treatment, and management of the diseases, disorders, and conditions that the RN(C) are authorized to diagnose, treat, and manage. A *referral* is when an RN(C) refers a patient to a medical care provider for further treatment, care, or management. This occurs when patients are presenting with symptoms outside of what is provided in this document, including symptoms that require urgent referral.

### Management and Intervention

#### Goals of Treatment<sup>1,2π</sup>

- Relieve symptoms
- Prevent the spread of infection
- Provide supportive care until the source of infection can be treated by a dentist

#### Non-pharmacologic Interventions<sup>1,2</sup>

- Warm saline rinses
- Soft food and avoiding intensely hot and cold food or drinks, if they increase pain

#### Pharmacologic Interventions<sup>1–4</sup>

##### To relieve pain and fever:

- Acetaminophen 325mg, 1-2 tabs orally q4-6h PRN<sup>5</sup>
- Ibuprofen 200mg, 1-2 tabs orally q4-6h PRN<sup>6</sup>

**Note:** Clients may inquire about complementary and alternative medical (CAM) treatments. However, CAM treatments may not be supported by empirical evidence and may cause harm. Client education regarding recommended treatment options is important.<sup>7–9</sup>

Definitive dental treatment with surgical drainage (incision and drainage) of abscess is essential for the treatment of dental abscess, and may include further dental repair via root canal, pulpotomy or pulpectomy, or tooth extraction by a dentist. Referral and follow-up with a dentist is required, and may reduce the need for antibiotic prescribing, and reduce delays for definitive treatment of dental abscess. Referral to the emergency room or dentist for urgent follow-up is required, regardless of treatment decision, as incision and drainage of dental abscess is not within the RN(C) scope.<sup>1–4 π</sup>

##### Preferred oral antibiotic selection:<sup>3,4</sup>

- Amoxicillin 500mg orally three times daily, for 3-7 days, **OR**
- Penicillin VK 600mg orally four times daily, for 3-7 days

##### Alternative antibiotic selection for patients **WITH** penicillin allergy, and **NO** cephalosporin allergy:<sup>3,4</sup>

- Cephalexin 500mg orally four times daily, for 3-7 days

<sup>π</sup> Interdisciplinary Consultation

### Alternative antibiotic selection for patients with SEVERE penicillin allergy AND cephalosporin allergy:

- Macrolides (increased concern about growing rates of resistance, QTc prolongation, medication interactions and cardiovascular effects)<sup>10</sup>
  - Azithromycin 500mg orally on day 1, then 250mg orally daily for 4 days (5 days total),<sup>4</sup> **OR**
- Lincosamides (increased concern for growing rates of resistance and high side-effect profile)<sup>10</sup>
  - Clindamycin 300mg orally three times daily for 3-7 days<sup>3,4</sup>

**Note:** Clindamycin can cause *Clostridioides difficile* infection (CDI) with diarrhea, severe abdominal cramps, and blood or mucous in the stool. Do not use if there is a history of gastrointestinal disease. Clients must be advised to seek medical attention immediately if they experience persistent diarrhea, stomach pain or cramping, or notice blood or mucous in the stool during and following treatment with clindamycin.<sup>11</sup>

In case of allergies to the above antibiotics, recurrent infection, or unavailability of the previously listed antibiotics, consult with or refer to a physician or nurse practitioner.

### Pregnant or Breastfeeding Clients<sup>π</sup>

When administering, dispensing, or prescribing a medication to an individual who is pregnant or breastfeeding, RN(C)s are encouraged to consult with interdisciplinary team members such as a pharmacist, physician, or nurse practitioner, as risks and benefits of medication use may vary depending on patient-specific considerations. The considerations noted here are restricted to medications that are directly contraindicated.

- Acetaminophen, Amoxicillin, Penicillin V, Cephalexin, and Azithromycin may be used as listed above
- Clindamycin is contraindicated in the first trimester of pregnancy
- Ibuprofen is not recommended for **pregnancy**, particularly after 20 weeks gestation<sup>6</sup>

### Potential Complications<sup>2,12π</sup>

- Orofacial space infections
- Ludwig's Angina
- Recurrent abscess formation
- Hematogenous dissemination\*
- Osteomyelitis of the jaw
- Bacteremia (sepsis)

\*Dental infections are associated with bacteremic seeding of heart valves and prosthetic devices, preterm birth, and an increased risk of coronary heart disease and cerebrovascular events<sup>2</sup>

### Client Education/Discharge Information<sup>1,2π</sup>

- Counsel client about appropriate use of medications (dosage and side effects)
- Recommend intake modifications as needed, including soft food diet and avoiding hot/cold intake if associated pain
- Educate that prescribed medication does not treat the source of infection – treatment by a dentist is required, even if pain is alleviated temporarily
  - Symptoms will recur without appropriate treatment of the offending tooth
- Recommend and educate on dental hygiene or improvement of dental hygiene, including:
  - Twice daily (or more) teeth brushing
  - Toothpaste with fluoride
  - Daily dental flossing
  - Regular dental cleaning and check-ups
  - A healthy diet, including limiting food and drinks that are high in acid, sugar, and starch

- Cessation of smoking
- Wearing a mouth guard or dental protection during sports or other activities that increase the risk of tooth injury

## Monitoring and Follow-up<sup>1,3</sup>

- Return to the clinic if worsening fever, swelling, or discharge/pus
- Return to the clinic if no response to antibiotic treatment within 24-48 hours
- Return to the clinic if unable to maintain adequate hydration and intake
- Return to the clinic if the onset of jaw pain with ear, chest, shoulder, or arm pain (potential cardiac complications)

## Consultation and/or Referral<sup>1,3,4</sup>

- RN(C)s should consider consultation or referral when they are unable to meet the BCCNM RN(C) practice standard: *Acting within Autonomous Scope of Practice*.<sup>13</sup>
- Refer to the emergency room if the client requires IV antibiotics, and/or emergency dentist for definitive treatment and follow-up
- Consult a physician or nurse practitioner if a large abscess or severe infection is suspected
- Refer if the client is acutely ill, if the infection has spread to the soft tissues of the neck, or if there is no response to treatment in 48-72 hours
- Refer immediately if facial swelling beyond midline, intractable pain, or new onset of symptoms consistent with complications
- Refer immediately if an underlying or secondary pathology is suspected (i.e., osteomyelitis or orofacial space infection)

## Documentation

According to agency policy and BCCNM standards.

## References

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